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Auta, Asa, Strickland-Hodge, Barry, Maz, Julia and Alldred, David P.

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Pharmacist prescribing in the United Kingdom and the implication for the Nigerian context

Asa Auta, Barry Strickland-Hodge, Julia Maz, David P. Alldred
School of Healthcare, Faculty of Medicine and Health, University of Leeds, Leeds, LS2 9JT, UK

Corresponding author: Asa Auta
Email: hs09aa@leeds.ac.uk Telephone: +44113 3437185

ABSTRACT

Background: Non-medical professionals including pharmacists have been granted the right to prescribe medicines in the United Kingdom. In Nigeria, only medical doctors, dentists and some nurses in primary care facilities have the legal right to prescribe medicines and patients' access to prescriptions can be seriously affected by a shortage of prescribers and long waiting times in hospitals.

Objective: This article presents a review of pharmacist prescribing in the UK including its model, impact, facilitators and barriers and discusses the implications for the Nigerian context.

Methods: A literature search was conducted in Medline, Embase, International Pharmaceutical Abstracts and Cumulative Index to Nursing and Allied Health Literature databases for studies investigating pharmacist prescribing in the UK between 1990 and August 2013.

Results: The review identified that legislative change in the UK has enabled pharmacists to prescribe first as supplementary prescribers then as independent prescribers. This policy change was driven by the desire to increase patients' access to medicines and promote the utilisation of the skills of non-medical professionals while maintaining patient safety. Although more robust research evidence is needed to demonstrate the effectiveness of pharmacist prescribing, available evidence shows that it has had an impact on patient access to medicines.

Conclusion: Pharmacist prescribing has the potential to promote access to prescription medicines, free doctors' time to enable them deal with complex cases and promote efficient use of pharmacists' clinical skills in Nigeria as it does in the UK. Factors which can promote the extension of prescribing rights to pharmacists in Nigeria include the current level of pharmacists' training and the clinical roles of pharmacists in some tertiary hospitals.

Key words: Pharmacist prescribing, Nigeria, United Kingdom

La prescription par les pharmaciens au Royaume-Uni et l'implication pour le contexte Nigérian

Auteur correspondant: Asa Auta,
Email: hs09aa@leeds.ac.uk Téléphone: +44113 3437185

RESUME

Contexte: Les professionnels non-médicaux y compris les pharmaciens ont reçu le droit de prescrire des médicaments au Royaume-Uni. Au Nigeria, seuls les médecins, les dentistes et certains infirmiers dans les établissements de soins primaires ont le droit de prescrire des médicaments et l'accès des patients aux prescriptions peut gravement être affecté par un manque de prescripteurs et par de longues périodes d'attente dans les hôpitaux.

Objectif: Cet article présente un bilan sur les prescriptions par les pharmaciens au Royaume-Uni y compris le modèle, les répercussions, les animateurs et les barrières et traite les implications pour le contexte nigérian.

Méthodes: Une recherche documentaire a été menée à Medline, Embase, International Pharmaceutical Abstracts and Cumulative Index to Nursing and AlliedHealthLiteraturedatabases pour des enquêtes sur la prescription des pharmaciensau Royaume-Uni entre 1990 et août 2013.

Résultats: Le bilan a identifié qu'un changement législatif au Royaume-Uni a autorisé les pharmaciens à prescrire d'abord en tant que prescripteurs complémentaires, puis en tant que prescripteurs indépendants. Ce changement de politique fut mené par le désir de renforcer l'accès des patients aux médicaments et promouvoir l'utilisation des compétences des professionnels non-médicaux tout en maintenant la sécurité des patients. Bien qu'il soit nécessaire de trouver des preuves de recherches robustes pour démontrer l'efficacité de la prescription des pharmaciens, les preuves disponibles montrent que cela a eu des répercussions sur l'accès du patient aux médicaments .

Conclusion: La prescription par les pharmaciens a le potentiel de promouvoir l'accès aux médicaments d'ordonnance, de donner du temps aux docteurs pour leur permettre de traiter des cas plus complexes et promouvoir l'usage efficace des compétences cliniques des pharmaciens au Nigéria comme c'est le cas au Royaume-Uni. Les facteurs qui contribuent à l'extension des droits de prescription aux pharmaciens comprennent le niveau actuel de la formation des pharmaciens et les rôles cliniques des pharmaciens dans certains hôpitaux tertiaires.

Mots clés: pharmacien prescripteur, Nigéria, Royaume-Uni

INTRODUCTION

Prescribing to patients has been the exclusive role of doctors and dentists until the introduction of non-medical prescribing (NMP) in some countries which allowed healthcare professionals including nurses and pharmacists to prescribe some medicines.[1] A number of countries have made legislation concerning pharmacist prescribing including the USA, UK, Canada, South Africa and New Zealand.[2, 3] However, prescribing rights for pharmacists are not the same in all of these countries. For example, in the UK, pharmacists can prescribe any medicine (except some specific controlled drugs for treating addiction) within their area of competence,[4] while in South Africa pharmacists are only allowed to prescribe from a limited formulary.[2]

In Nigeria, only medical doctors and dentists have the legal right to prescribe medicines. However, a nurse or a community health worker can be designated by the government to prescribe medicines in a primary healthcare facility without a doctor.[5] Access to medicines in Nigeria can be seriously affected by the shortage of medical prescribers (40 doctors per 100,000 people compared with 280 doctors per 100,000 people in the UK);[6] long waiting times in hospitals and poor geographical access to physicians.[7] Typically, a doctor in an out-patient department in a teaching hospital in Nigeria has approximately 40 – 50 patient consultations daily and more than half of these patients wait for more than an hour in the out-patient department before seeing a doctor.[7]

Pharmacists in Nigeria are highly educated professionals with adequate training in medicine management. Their mode of training follows similar models to those in advanced countries including the UK.[8] It consists of a five-year undergraduate professional programme followed by one-year pre-registration work-based supervised training.[8] Despite the cost and high level of training of pharmacists in Nigeria, their expertise is not always utilised effectively as their roles have not been expanded to a more clinical one. They mainly perform the traditional role of dispensing, which could be handled by suitably trained pharmacy technicians as in other countries such as the UK.

Pharmacists in Nigeria have shown willingness for expanded clinical roles including prescribing.[9] Hence, this article reviewed pharmacist prescribing in the UK including its models, impact, facilitators and barriers and discussed the implications for the Nigerian context.

METHODS

We conducted a review of pharmacist prescribing in the UK. A literature search was conducted in Medline, Embase, International Pharmaceutical Abstracts (IPA) and Cumulative Index to Nursing and Allied Health Literature (CINAHL) databases. Search terms including pharmacist prescribing, supplementary prescribing, independent prescribing, and non-medical prescribing were used. Search techniques including combination of search terms using 'AND/OR', adjacency searching and truncation were employed. Additional literature search was also conducted on Google scholar and the Department of Health (DoH) website to identify relevant grey literatures including policy documents and research reports.

Studies investigating pharmacist prescribing in the UK between January 1990 and August 2013 were considered. Research investigating nurse and pharmacist prescribing, major research reports and documents from the UK Department of Health were also included. Additional articles were identified through cross-references. Where more than one publication present the same or similar findings, the most recent publication or the one with a detailed description of the methods and findings was considered. All the articles considered for this review were published in the English Language.

RESULTS

Models and levels of pharmacist prescribingin the UK

Two models of pharmacist prescribing are identifiable in the UK namely supplementary prescribing and independent prescribing which were introduced in 2003 and 2006, respectively.[10] Supplementary prescribing involves a *"voluntary partnership between an independent prescriber (a doctor or dentist) and a supplementary prescriber to implement an agreed patient-specific clinical management plan with the patient's agreement"* .[10] In the independent prescribing model, the prescriber

"is responsible and accountable for the assessment of patients with undiagnosed or diagnosed conditions and for decisions about the clinical management required, including prescribing" .[10]

To qualify as a pharmacist independent prescriber (which now includes a qualification as a supplementary prescriber), a pharmacist must have at least 2 years post-registration experience in a patient-orientated environment, undergo study at university level equivalent to 26 days of full-time education and at least a 12-day period of learning in practice with a designated

medical practitioner.[1] Core components of a pharmacist prescribing course include consultation, decision making, assessment and review; psychology of prescribing; prescribing in team context; applied therapeutics; evidence-based practice and clinical governance; legal, policy, professional and ethical aspects; and prescribing in the public health context.[1] Pharmacist prescribers are expected to develop a number of competencies including recognising signs and symptoms of illness, using relevant diagnostic aids, and clinical assessment skills.[1]

There are approximately 2400 registered pharmacist supplementary/independent prescribers in the UK.[1] These prescribers are able to prescribe medicines for any condition within their clinical competence but not cocaine, dipipanone and diamorphine for treating addiction.[4] However, pharmacist prescribers in the UK usually prescribe in one clinical area and this has been criticized for its limited scope and inability to meet the needs of patients with multiple conditions.[11]

Impact of pharmacist prescribing

Findings from the literature were consistent across various stakeholders including doctors, pharmacists, patients, and policymakers in reporting an increase in patients' access to treatment as a result of NMP, and a perceived reduction in delays to appointments.[12,13,14]

Research evidence demonstrating any improvement in outcome to patient therapy due to pharmacist prescribing is limited.[15] However, Bruhn et al.,[15] conducted an exploratory randomised control trial (RCT) in the UK to compare the effectiveness of pharmacist medication review, with or without pharmacist prescribing, with standard care, for patients with chronic pain. The RCT involved 196 chronic pain patients (from six general practices) randomised into three study groups: pharmacist medication review with pharmacist prescribing (n=70); pharmacist medication review with feedback to GP and no planned patient contact (n=63); and treatment as usual group (n=63). Patients in the pharmacist prescribing group showed significant improvement in some clinical outcomes (including chronic pain grade) after six months of follow-up. This suggests that pharmacist prescribing could result in improvement in pain-related outcomes.

Studies exploring patients' experience of pharmacist prescribing have reported positive benefits including pharmacists' approachability, better patient education and extended consultation time.[11,12]Despite these benefits, some patients have reported that they would prefer to consult a doctor for a prescription, especially for initial diagnosis or when their illness is considered serious.[11]

Doctors have reported positive benefits of pharmacist prescribing including comprehensive medication review, keeping doctors' medicine knowledge updated, and freeing doctors' time to allow for other specialised responsibilities.[16] However, some doctors reported that pharmacist prescribing is likely to result in the deskilling of junior doctors.[17] There are assertions that NMP reduces doctors' workload; however, no research has clearly demonstrated this.[18] What is usually reported in most studies is a shift or reorganisation of tasks and it is uncertain whether this has resulted in an overall reduction in doctors' workload.

Pharmacists have also reported positive impacts on their role to include: enhanced job satisfaction; better use of their clinical skills; recognition of the pharmacists' role in patient care by other healthcare professionals; integration into the patient management team and more autonomy and responsibility in patient management.[12,17,19] A survey conducted among 105 qualified pharmacist prescribers in Northern Ireland found that those who were prescribing, were more likely to report enhanced job satisfaction than those who qualified as prescribers but had never prescribed.[19]

Facilitators to pharmacist prescribing

The legislative change (Health and Social Care Act, 2001) following the recommendations of the Crown reports, enabled nurses and pharmacists to prescribe first as supplementary prescribers then as independent prescribers in the UK. This policy change was driven by the desire to increase patients' access to medicines and to promote the utilisation of the skills of non-medical professionals while maintaining patient safety.[10]

The literature shows that the implementation of pharmacist prescribing in the UK was aided by the changes that occurred in the professional structure of pharmacy (especially within the hospital setting) prior to the introduction of pharmacy prescribing.[17,20] Between the 1970s and the 1980s, there was a change in hospital pharmacy practice that saw the development of clinical pharmacy services with pharmacists contributing to prescribing decisions, monitoring and modifying patient therapy among other clinical roles.[20] Further development in clinical pharmacy practice led to specialisation in different clinical practice areas including cardiovascular, renal, diabetes and clinical nutrition which facilitated the development of supplementary prescribing in these areas.[18] Pharmacy technician roles in the UK were also expanded to include selection and labelling of

dispensed items, accuracy checks, medicine stock checks, etc.[20] This optimal use of the skills of pharmacy support staff resulted in freeing-up pharmacists' time to concentrate on advanced clinical roles.

Furthermore, the advancement in pharmacy education and training with increasing integration of clinical pharmacy practice at both the undergraduate and postgraduate levels was also an important facilitator to pharmacist prescribing in the UK.[21] The European Union Working Time Directive which limit doctors' weekly working hours, initially to 58 hours (in August, 2004), and then to 48 hours by 2009 also necessitated role extension to non-medical professionals in the UK.[22] Other factors including effective teamwork among hospital staff and community pharmacists' accessibility were also reported as facilitators to the implementation of pharmacist prescribing in the UK.[17]

Barriers to pharmacist prescribing

Although there are reports showing support for supplementary prescribing by doctors, especially mentors of supplementary prescribers,[12,17] research has shown that doctors were usually less supportive of pharmacist independent prescribing than supplementary prescribing.[12,17] The main concerns of the medical profession, as revealed in the literature, centred on threats to medical dominance, professional boundary encroachment, deskilling of junior doctors and inadequate skills of pharmacists in clinical examination and diagnosis.[12,17]

Barriers to the implementation of pharmacist prescribing reported in empirical studies were mainly organisational. Early barriers to the implementation of supplementary prescribing reported included inadequate funding for training and setting up prescribing services, lack of organisational recognition and policies to support NMP in some trusts, lack of awareness among patients and healthcare professionals, delay in obtaining prescription pads, problems in generating electronic prescriptions, lack of access to patient records, and paperwork and restriction due to the creation of the patient-specific clinical management plan.[23]

The literature also revealed that the implementation of pharmacist prescribing within the community pharmacy setting is poor. For example, a questionnaire survey conducted in the UK among 401 pharmacists to explore their early experience as supplementary prescribers, revealed that respondents in other practice settings including hospital and primary care medical practice were three times more likely to prescribe than those in community pharmacy settings.[23] Barriers associated with prescribing in community pharmacy settings included difficulty in accessing patient records, lack of privacy, inadequate support staff, and lack of collaborations between community pharmacists and GPs.[23]

DISCUSSION

This review demonstrated that pharmacist prescribing has the potential to increase patients' access to medicines, promote efficient use of pharmacists' skills, free-up doctors' time to concentrate on complex cases and reduce delays to appointments. This would be of major benefit to Nigeria. However, pharmacist prescribing would be more beneficial in the Nigerian context if pharmacist prescribers were trained and prepared to prescribe across multiple conditions and were able to treat comorbid conditions within their clinical area. For example, a pharmacist prescriber in the clinical area of HIV should be able to treat HIV and tuberculosis co-infection since co-infection is common. This will make effective use of the available limited human resources rather than referring patients with comorbidity to a doctor.

Furthermore, a number of reports have shown that patients have unhindered access to prescription medicines (without a prescription) through various authorised and unauthorised sources including community pharmacies and patent medicine vendors.[24,25] This is possible because of the poor regulation of the distribution and sales of medicines in Nigeria.[24,25]

Although many factors could account for patients' involvement in such practice, the cost of getting a prescription from a medical prescriber and difficulty in access to medical prescribers due to long waiting times in hospitals have been cited by patients.[24] Nevertheless, this practice is harmful as it often results in irrational use of medicines. Although proper regulation and enforcement of laws governing the sale and distribution of medicines is essential in curtailing this practice, pharmacist prescribing could minimise this illegal access to prescription medicines and reduce medicines harm in community pharmacies where there is a pharmacist prescriber.

A number of facilitators to the introduction of pharmacist prescribing are identifiable in the Nigerian context including the current level of training of pharmacists and the clinical roles of some hospital pharmacists. In Nigeria, clinical pharmacy was introduced into undergraduate pharmacy training in 1990.[26] Today, clinical pharmacy courses are well established in undergraduate and postgraduate

pharmacy programmes. In addition, many pharmacists in Nigeria specialise as clinical pharmacists at various universities and at the West African Postgraduate College of Pharmacists.[27] About two-thirds of the 482 Nigerian pharmacists who successfully completed the WAPCP fellowship programme as of 2011 were in the specialty of clinical pharmacy.[27]Furthermore, many tertiary hospitals in Nigeria have decentralised their pharmacy units into specialised units including paediatric, medical, intensive care, oncology, surgical, accident and emergency pharmacy in order to meet patients' care need. This change in structure can be used to promote specialisation in these clinical areas. Also, anecdotal evidence has shown that some Nigerian pharmacists in secondary and tertiary hospitals are involved in clinical ward rounds with doctors, during which they review patients' medications, contribute to prescribing decisions and monitor patient therapy. This professional relationship between doctors and pharmacists could potentially facilitate the implementation of supplementary or collaborative prescribing.

Community pharmacists' accessibility and the reliance of patients on them for the treatment of their minor illnesses could potentially facilitate pharmacist prescribing in Nigeria. A report by the World Bank showed that about 25% of diarrhoea and 33% of fever or cough cases in children in Nigeria were treated in community pharmacies.[28]A recent survey conducted among 432 clients of community pharmacist that explored their perception on pharmacist prescribing in Nigeria revealed a high support (91.4%) for it.[29] These respondents commonly cited improving access to prescriptions as their reason for supporting pharmacist prescribing. However, over two-third of these respondents were more comfortable with the pharmacist prescribing from a limited formulary. These findings are suggestive of patients' acceptance for pharmacist prescribing in Nigeria.

The medical profession is likely to be a major opposition to pharmacist prescribing in Nigeria. Some reports, including that of Erah (2003),[30] have reported opposition from doctors as a barrier to extending clinical roles of pharmacists in Nigeria because doctors consider some of the extended pharmacy roles as an encroachment into their professional boundaries. However, if supplementary prescribing is initially proposed in the Nigerian context (as was in the UK), this opposition may be overcome. The medical profession favours supplementary prescribing because it maintains doctors' control of the prescribing process.[18] Supplementary prescribing model would also foster collaboration between doctors and pharmacists and provide the prescribing pharmacists the opportunity to learn from the medical prescriber especially in the aspect of differential diagnosis and the experience gained would be essential if independent prescribing was subsequently implemented.

Another likely barrier to pharmacist prescribing in Nigeria is the shortage of pharmacy staff including pharmacists and pharmacy technicians. There are approximately 16,000 (10 per 100,000 population) pharmacists in Nigeria,[31]compared to the UK with about 42,000 practicing pharmacists (68 per 100,000 people).[32] As at 2007, there were 5483 pharmacy technicians registered with the Pharmacists' Council of Nigeria.[33] Anecdotally, a significant additional number of pharmacy technicians are not registered with the council. This limited population of pharmacists and their support staff could serve as a barrier to role expansion. However, increasing the utilisation of pharmacy technicians could benefit the system. Therefore, suitably trained pharmacy technicians would be needed to take up some of the traditional roles of pharmacists in order to free-up pharmacists' time for advanced roles.

Similar to community pharmacists in the UK, lack of collaborative practice between doctors and community pharmacists; lack of access to patient records; and inadequate support staff and infrastructure are likely to hinder pharmacist prescribing in community pharmacy settings in Nigeria. There is currently no structure in place that promotes partnership between doctors and community pharmacists or between hospitals and community pharmacies in Nigeria. Therefore, sharingof patients' information including clinical records between these two settings would be a problem and this would result in the fragmentation of care.

As with most studies, this review has some limitations. Unlike a systematic review, the methodological quality of the primary research articles included in this review was not assessed. Hence, it is possible that some research papers with low methodological quality were included. Also, we included grey literatures which are likely to impact on the quality of evidence we presented. However, research evidence in the field of pharmacist prescribing is still emerging and the inclusion of grey literatures provided more comprehensive information for our review. Finally, our literature search was largely conducted using electronic databases. Therefore, it is possible that some eligible articles that were not indexed on the databases searched were excluded.

CONCLUSION

Pharmacist prescribing has the potential to promote better patient access to prescription medicines; free doctors' time to enable them deal with complex cases; promote efficient use of pharmacists' clinical skills; enhance pharmacists' job satisfaction and their contribution to healthcare delivery in Nigeria. Facilitators to the extension of prescribing rights to pharmacists in Nigeria include the current level of pharmacists' training and the clinical roles of pharmacists in some tertiary hospitals. However, if current pharmacists' roles are to be extended to include prescribing, more training and specialisation within clinical areas are needed and additional suitably trained pharmacy technicians will also be needed to take up some of the current roles of pharmacists in order to give pharmacists more time for advanced roles.

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